IN THE CLAIMS

1. (cancelled)

2. (cancelled)

3. (cancelled)

4. (cancelled)

5. (cancelled)

6. (cancelled)

7. (cancelled)

8. (cancelled)

9. (cancelled)

10. (cancelled)

11. (cancelled)

12. (cancelled)

13. (cancelled)

14. (cancelled)

15. (cancelled)

16. (cancelled)

17. (previously amended) A spurious ratio controlled feed-forward amplifier comprising:

a signal source producing a multi-carrier input signal;

an input sampling coupler having an input coupled to an output of the signal source;

a first phase and gain adjusting circuit having an input terminal coupled to an output of the input sampling coupler;

a main amplifying device having an input terminal coupled to an output of the phase and gain adjusting circuit and an output terminal at which an amplified signal is provided, wherein the amplified signal comprises an amplified input signal component and a spurious signal component;

a distortion sampling coupler having an input coupled to the output terminal of the main amplifier;

a first delay line having an input port coupled to an output port of the input sampling coupler;

a summing coupler having an input coupled to an output of the first delay line, and an input port coupled to a forward port of the distortion sampling coupler;

a first monitoring coupler having an input coupled to an output of the summing coupler and a coupled port forming a first monitoring point;

a second delay line having an input coupled to a distortion sampling coupler output, and providing delay to the amplified signal to produce an inverted amplified signal at a second delay line output;

a second monitoring coupler having an input coupled to an output of an error signal injection coupler;

a second phase and gain adjusting circuit coupled to the first monitoring coupler;

an error amplifier having an input coupled to an output of the second phase and gain adjusting circuit, and an error amplifier output coupled to a coupled port of the error signal injection coupler; and

a differential spurious ratio control system having a first input coupled to the first monitoring point, a second input coupled to the second monitoring point, a third input coupled to a frequency information output of the signal source, and a control output coupled to a control input of the second gain and phase adjusting circuit;

a first narrowband receiver coupled to the first monitoring point for capturing the spurious component at the output of the summing coupler;

a second narrowband receiver coupled to the second monitoring point for capturing the spurious component of an output signal of the feed-forward amplifier;

and wherein the control system further comprises a ratio detector having a first ratio detector input coupled to a first narrowband receiver output, and a second ratio detector input coupled to a second narrowband receiver output, for detecting the ratio of the spurious component at the output of the sampling coupler and the spurious component of the feed-forward amplifier output signal.

18. (original) The feed-forward amplifier according to claim 17, wherein the spurious signal component includes an inter-modulation product of the multi-carrier input signal.

19. (original) The feed-forward amplifier according to claim 17, wherein the spurious signal component includes noise generated by the main amplifier.

20. (cancelled)

21. (cancelled)

22. (original) The feed-forward amplifier according to claim 17, further comprising a pre-distortion circuit coupled between the first gain and phase adjusting circuit and the main amplifying device.

23. (cancelled)

24. (cancelled)

25. (cancelled)

26. (cancelled)

27. (cancelled)

28. (cancelled)

29. (cancelled)

30. (cancelled)

31. (cancelled)

32. (cancelled)

33. (cancelled)